

**BY ORDER OF THE COMMANDER
MACDILL AIR FORCE BASE**

**MACDILL AIR FORCE BASE
INSTRUCTION 33-118**



12 NOVEMBER 2013

COMMUNICATIONS AND INFORMATION

**ELECTROMAGNETIC SPECTRUM
MANAGEMENT**

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31 January 1997

This instruction establishes policy and procedures for the effective management of radio frequencies at MacDill Air Force Base (AFB). It applies to all organizations, including tenant units and contractors that use radio frequencies at MacDill AFB. This instruction implements the policy and procedures established in AFI 33-580, *Spectrum Management*, and AFI 10-707, *Spectrum Interference Resolution Program*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at https://www.my.af.mil/afirms/afirms/afirms/rds/rds_series.cfm. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include (1) changing the Installation Frequency Manager to the Installation Spectrum Manager and updating their responsibilities (2) clarifying unit responsibilities to resolve electromagnetic

interference as part of the Air Force Spectrum Interference Resolution program, identifying risks for Users of Unlicensed Federal Communications Commission (FCC) Part 15 Devices.

1. Applicability. This instruction applies to all users with equipment that radiates in the electromagnetic spectrum.

2. General: The radio frequency spectrum is a limited natural resource that is accessible to all nations. It is imperative that we develop and administer our use of this resource wisely to maintain a free democratic society while ensuring its availability to serve future requirements. Therefore, the national objective for the use of the radio spectrum is to make effective, efficient, and prudent use of the spectrum in the best interest of the nation.

3. Responsibilities:

3.1. The Installation Spectrum Manager (ISM):

3.1.1. Ensures users understand the parameters of their assigned frequencies.

3.1.2. Maintains current frequency management records of frequencies assigned to the installation and outlying activities hosted by the installation. Provides using activities with frequency site licenses.

3.1.3. Conducts a spectrum management customer education program.

3.1.3.1. Meets with unit points of contact (POC) annually to discuss current spectrum management issues and conducts customer education.

3.1.4. Processes frequency proposals and applications for equipment frequency allocations, and ensures submission through appropriate command channels.

3.1.5. Provides spectrum management assistance and interpret guidance to host installation and tenant activities.

3.1.6. Reviews installation operation plans and requirements documents, and obtains frequency support through command channels.

3.1.6.1. Contacts Deployable units monthly to identify upcoming exercises and contingencies.

3.1.6.2. Contacts the wing plans, programs office (XP), and other planning offices monthly to obtain information about new equipment and installations.

3.1.7. Ensures contractor activities using Air Force frequencies to support Air Force requirements follow Air Force policies for electromagnetic spectrum use.

3.1.8. In cooperation with using activities, verifies frequency assignment requirements, validates existing frequency assignment parameters and submits appropriate modifications, renewal or deletion through the appropriate command channels.

3.1.9. Coordinates spectrum use with the DOD AFCs for any system, including airborne operations within the AFC's AOR. Particular attention is given to the radio horizon where it extends into the DOD AFC geographical boundaries.

3.1.10. Maintains and keeps current their respective records in the DoD Frequency Resources Record System (FRRS) database.

3.1.11. Drafts spectrum management portion of any memorandums of understanding (MOU) or memorandums of agreements (MOA) and ensure all MOUs and MOAs are on file.

3.1.12. Maintains current POC listing (name, unit, electronic mail [E-mail], address, and phone number) for each unit.

3.1.13. Writes and publishes installation instructions or supplements to higher headquarters guidance.

3.1.14. Ensures using activities, program/project offices, etc., obtain spectrum supportability guidance prior to entering into a contractual obligation for all electromagnetic spectrum dependent systems.

3.1.15. Complies with the requirements of the Frequency Review Program.

3.2. The Using Activity. Each organization authorized to use frequencies will:

3.2.1. Identify unit POCs for frequency matters to the ISM. Use Attachment 2 for letter format.

3.2.2. Ensure appropriate spectrum supportability requirements are obtained prior to purchasing any RF equipment or entering into any contractual obligations involving the use of RF dependent devices to include providing correct technical data for systems not downward directed by higher level organizations.

3.2.3. Obtain a frequency assignment before using devices that intentionally emit RF energy.

3.2.4. Maintain a copy of frequency authorizations received from the ISM.

3.2.5. Request the minimum number of frequencies necessary to accomplish the mission.

3.2.6. Request the minimum transmitter power and antenna gain/height necessary to ensure adequate coverage.

3.2.7. Ensure electromagnetic radiating equipment operations comply with authorized parameters identified in the frequency assignment notification.

3.2.8. Act promptly to report and resolve incidents of interference according to AFI 10-707.

3.2.9. Use radiation-suppression devices (dummy loads) as much as possible when tuning, testing, or experimenting with any equipment that emits radio frequencies.

3.2.10. Provide, in writing to the ISM, the name, E-mail address, and phone number of a POC for unit frequency matters and provide updated information when the POC changes.

3.2.11. Notify the ISM, in writing, immediately when frequencies are no longer required.

3.2.12. Obtain approval from the ISM before modifying any existing emitters or antennas (i.e., increase power, change antenna height or gain), if outside of the assigned parameters of the frequency authorization.

3.2.13. Assist ISM in reviewing and verifying equipment parameters during mandatory and periodic reviews.

4. Frequency Management Lifecycle

4.1. Application for Radio Frequencies and Lead Times:

4.1.1. Spectrum users in the vicinity of MacDill AFB will request radio frequencies through the ISM. The ISM will then coordinate with AMC who will in turn coordinate with Air Force Spectrum Management Office (AFSMO).

4.1.2. Requesters must give AFSMO at least 60 calendar days lead time for frequency proposals.

4.1.3. A fill-in-the-blank information worksheet is provided upon request to unit frequency monitors to assist in preparation.

4.1.4. Requests that do not allow for the prescribed lead time must be accompanied by an impact statement justifying the urgency and signed by the using activity commander.

4.1.5. Frequency managers for United States Central Command, United States Special Operations Command, JCSE, and other tenant units will coordinate frequency requests with the ISM if the requested frequencies will be used on MacDill AFB.

4.2. **Frequency Assignment.** A frequency assignment is an authorization to operate, within prescribed parameters, electronic equipment that emits radio frequency energy. Assignments will be provided through AMC channels to the ISM, who will, in turn, forward the authorization to the requesting units.

4.3. **Radio Frequency Modification.** An assignment modification is the addition, substitution, or removal of any item in an existing frequency assignment, i.e., increase/decrease antenna height or gain, change antenna locations, change equipment used, increase/decrease power, etc. (except serial number, frequency, and state). Organizations must contact the ISM for assistance in obtaining the necessary national level approval PRIOR to obligating funds or any physical changes occurring. Tenant units will submit similar requests through their parent major command channels after coordination with the ISM. As stated earlier, the AFSMO requires at least 60 calendar days to process frequency modifications.

4.4. **Radio Frequency Deletions.** Send deletion requests to the ISM as soon as the frequency is no longer needed. Requests for deletions will be submitted by letter to the ISM from the unit desiring the action. The request shall contain frequency or frequencies to be deleted and the serial number(s). Serial numbers can be found on the assignment authorization message (item 102). Tenant organizations will submit deletion requests through their parent major command, with an information copy to the ISM. Do not request deletions if the need for the frequency ends within 120 days of the assignment expiration date.

5. **Rules and Conditions Governing Use of Assigned Frequency or Frequencies.** Each organization authorized use of a frequency or frequencies is responsible for ensuring compliance with the following provisions:

5.1. Maintaining the authorization document for each frequency in use.

5.2. Ensuring equipment emitting radio frequency energy is within the limitations and tolerances stated in the RFA.

5.3. Following Air Force frequency management directives.

5.4. Reviewing assigned frequencies annually and requesting deletion of frequencies no longer required.

5.5. Using radiation suppression devices (dummy loads) to the maximum extent when testing, tuning, or experimenting. This will alleviate the possibility of inadvertent interference to other users.

6. Air Force Spectrum Interference Resolution (AFSIR) Program. The focus of the AFSIR program is to resolve electromagnetic interference (EMI) at the lowest level. A unit affected by an EMI incident must investigate to identify the source and the unit POC must submit initial, supplemental, and closing reports to the ISM IAW paragraph 6.2. The ISM will submit initial, supplemental, and closing reports through AMC to AFSMO. AFI 10-707 provides guidance for preparing the report.

6.1. The unit POC shall take the following steps when EMI is encountered:

6.1.1. Check with equipment maintenance personnel to determine if the EMI is the result of maintenance action or an equipment malfunction.

6.1.2. Check with other units in the geographical area to determine the area affected. (Knowing if other nearby units are experiencing the same type of EMI may aid in determining the interference source.)

6.1.3. Keep a log of all pertinent information on the interference, i.e., frequencies, description of the interference, dates/times, etc., that will be used for the report.

6.1.4. Contact the ISM or the Communications Focal Point at 828-2666, after duty hours, to have the ISM assist in the preparation of the EMI report.

6.2. Types of EMI Reports.

6.2.1. Initial Report. File as soon as possible, within 24 hours of the occurrence, after an EMI incident occurs.

6.2.2. Supplemental or Follow-On Reports. Submit to add or modify information previously submitted.

6.2.3. Closing Report. Submit when the EMI incident is resolved or requires no further action.

6.3. Exceptions to Reporting. Do not report an incident when:

6.3.1. The interference is transient EMI from natural source (for example, rain, solar activity, lightning, etc.).

6.3.2. The interference only affects training frequencies assigned on a non-interference basis for training purposes.

7. Users of Unlicensed Federal Communications Commission (FCC) Part 15 Devices. Part 15 devices are authorized to be utilized under FCC regulations on DoD installations. However, by utilizing these devices the user understands that they do not have any protection from harmful interference. In addition, if this piece of equipment is found to interfere with licensed equipment

it would be required to be relocated or possibly shut down. If two Part 15 devices are found to interfere with each other the installation commander will decide which device takes precedence.

8. Contacting the ISM. The ISM can be contacted by calling the Communications Focal Point at 813-828-2666 or DSN 968-2666.

SCOTT V. DeTHOMAS, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References:

AFI 33-580, *Spectrum Management*, 17 January 2013

AFI 10-707, *Spectrum Interference Resolution Program*, 20 June 2005

AFMAN 33-363, *Management of Records*, 1 March 2008

Forms Prescribed

None

Forms Adopted

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms:

AFSIR—Air Force Spectrum Interference Resolution

AFSMO—Air Force Spectrum Management Office

DoD—Department of Defense

EMI—Electromagnetic Interference

FCC—Federal Communications Commission

ISM—Installation Spectrum Manager

JCSE—Joint Communications Support Element

MOA—Memorandums of Agreements

MOU—Memorandums of Understanding

POC—Point of Contact

XP—Plans and Programs

Attachment 2

UNIT SPECTRUM POINTS OF CONTACT APPOINTMENT LETTER EXAMPLE

MEMORANDUM FOR 6 CS/SCXP (INSTALLATION SPECTRUM MANAGER)

FROM: UNIT/CC

SUBJECT: Spectrum Points of Contact

References: AFI 33-580, *Spectrum Management*
MACDI33-118, *Radio Frequency Spectrum Management*

1. IAW MACDI 33-118, para 3.2.1, the following individuals are appointed Unit Spectrum Points of Contact:

<u>Rank/Name</u>	<u>Email Address</u>	<u>Duty Phone</u>
PRIMARY NAME	Email Address	DSN ###-####
ALTERNATE NAME	Email Address	DSN ###-####

2. This appointment memorandum will be updated when the POC changes or annually regardless of changes.

3. IAW MACDI 33-118, Attachment 2, the following frequency or frequencies are used by this organization:

<u>Frequency</u>	<u>Usage</u>
FREQUENCY	USAGE
FREQUENCY	USAGE

4. Direct questions to above appointed individuals.

COMMANDER, Lt Col, USAF
Commander, Unit

cc:
Appointed Individuals